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## PATENT ABSTRACTS OF JAPAN

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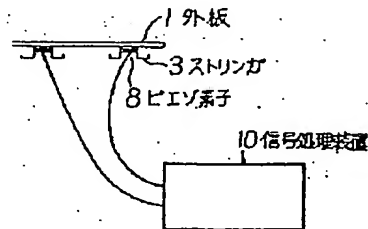
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(54) AIRCRAFT INNER SOUND REDUCTION DEVICE COPYRIGHT: (C)1994,JPO

(57) Abstract:

PURPOSE: To enable sound insulation in an extensive band, lighten a device and embody the sound insulation in the extensive band by using a signal treatment device to detect oscillation and to output a exciting piezo element and an offset driving signal.

CONSTITUTION: In a recessed part of each stringer 3 of a fuselage part of an aircraft, a piezo element 8 is installed. Each piezo element 8 is connected to a signal treatment device 10. That is, when the aircraft flies, oscillation is generated on a fuselage by aerodynamic action. This oscillation is detected by the piezo element 8 and delivered to the signal treatment device 10. The signal treatment device 10 outputs a driving signal to offset the oscillation from this input signal to the same piezo element 8. The piezo element 8 excites the stringer 3 in accordance with input and offsets the oscillation. In this way, generated oscillation is detected and actively restrained, and accordingly, oscillation in an extensive frequency region is effectively reduced.



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